

Write your name here

Surname

Other names

Centre Number

Candidate Number

Edexcel GCSE

Mathematics B

Unit 1: Statistics and Probability (Calculator)

Foundation Tier

Mock Paper

Time: 1 hour 15 minutes

Paper Reference

5MB1F/01

You must have:

Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser, calculator. Tracing paper may be used.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- **Calculators may be used.**
- If your calculator does not have a π button, take the value of π to be 3.142 unless the question instructs otherwise.



Information

- The total mark for this paper is 60.
- The marks for **each** question are shown in brackets – *use this as a guide as to how much time to spend on each question.*
- Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed – *you should take particular care with your spelling, punctuation and grammar, as well as the clarity of expression, on these questions.*

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ►

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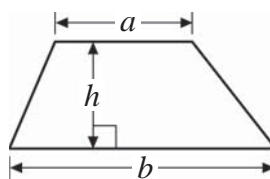
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GCSE Mathematics 2MB01

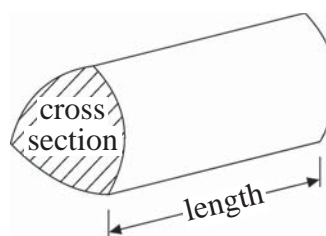
Formulae: Foundation Tier

**You must not write on this formulae page.
Anything you write on this formulae page will gain NO credit.**

Area of trapezium = $\frac{1}{2}(a + b)h$



Volume of prism = area of cross section \times length

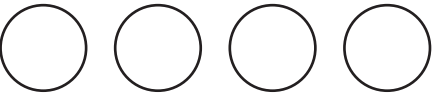
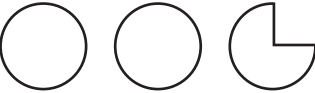
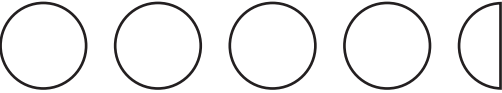



Answer all questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

1. The pictogram gives information about the number of points scored in each of three weeks by a rugby team.

Week	Number of points
Week 1	
Week 2	
Week 3	
Week 4	
Week 5	

Key: 
Represents 4 points

- (a) Write down the number of points scored

(i) in Week 1

.....

(ii) in Week 2

.....

(2)

In Week 4, the team scored 12 points.

- (b) Show this on the pictogram.

(1)

In Week 5, the team scored 10 points.

- (c) Show this on the pictogram.

(1)

(Total for Question 1 is 4 marks)



2. The table gives information about some televisions.

Television	Price (£)	Screen size (inches)	Freesat	HD ready	Internet TV
Panoramic	450	32	√	√	
Sonic	480	26		√	
Amrand	520	32		√	√
CG	490	26	√		
Powersave	515	32		√	√

(a) What is the price of the Amrand television?

£
(1)

(b) Which television has a screen size of 26 inches **and** is HD ready?

.....
(1)

(c) Which television has a 32 inch screen but does **not** have Internet TV?

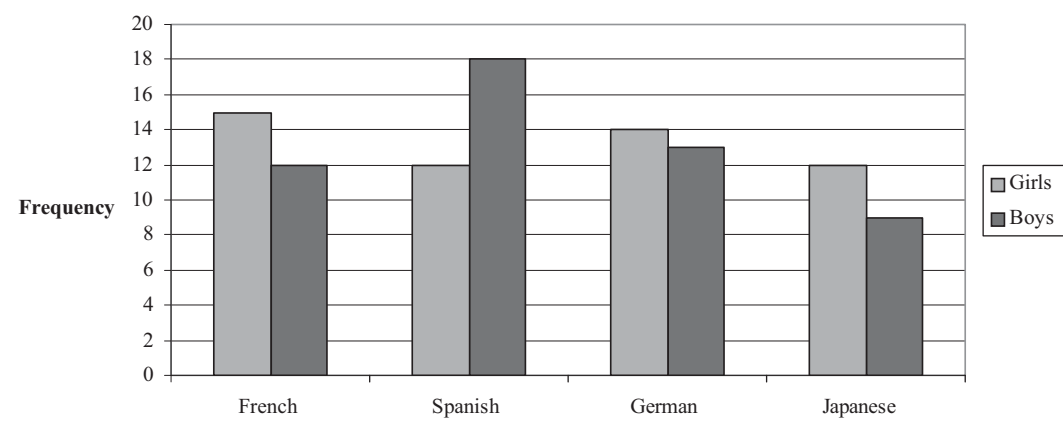
.....
(1)

(Total for Question 2 is 3 marks)



3. At Coldharbour School, all students study one of French or Spanish or German or Japanese.

The dual bar chart gives information about which one of these languages is studied by the students.



(a) How many boys study Spanish?

(1)

(b) Which is the most popular of these languages studied by the girls?

(1)

There are more girls than boys.

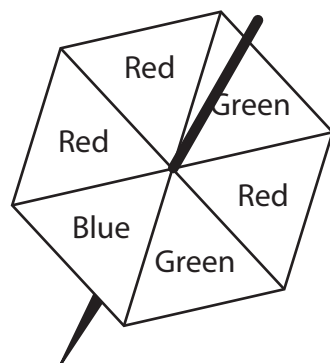
(c) How many more?

(2)

(Total for Question 3 is 4 marks)



4. Here is a fair 6-sided spinner.



Kathy is going to spin the spinner once.

(a) Which colour is the spinner **least** likely to land on?

(1)

(b) Write down the probability that the spinner will land on yellow.

(1)

(Total for Question 4 is 2 marks)



5. Gregor eats in a cafe.

He can choose **one** Drink and **one** Cake.

Drink	Cake
Coffee	Fruit
Tea	Sponge
Juice	Banana

(a) Write down all the combinations that he can choose.

(2)

On Monday, 150 people came into the cafe.

$\frac{1}{5}$ of the 150 people ordered a coffee.

(b) Work out $\frac{1}{5}$ of 150

(1)

On Tuesday, 35% of the customers ordered tea.

(c) Write 35% as a fraction.

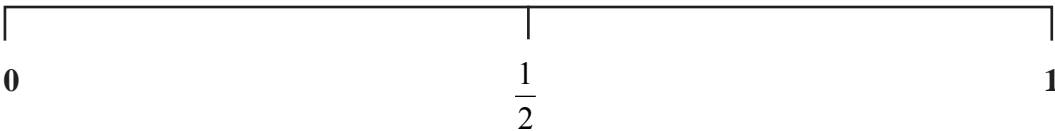
Give your fraction in its lowest terms.

(2)

(Total for Question 5 is 5 marks)

6. Liam throws a fair 50p coin.

On the probability scale below, mark with a cross (×) the probability that he will get a head.



(Total for Question 6 is 1 mark)



7. Here are eight numbers

8 2 7 5 3 4 2 2

(a) Write down the mode.

(1)

(b) Work out the range.

(2)

(c) Work out the median.

(2)

(Total for Question 7 is 5 marks)

8. Train A leaves a station at 11:30 am.

Train B leaves the station 3 hours later.

(a) At what time does train B leave the station?

(2)

Graham catches a train to Glasgow at 14 00

The train journey takes $5\frac{1}{2}$ hours.

Graham then waits 45 minutes for a train to Aberdeen.

The train gets to Aberdeen 1 hour and 20 minutes later.

(b) At what time does the train get to Aberdeen?

(3)

(Total for Question 8 is 5 marks)

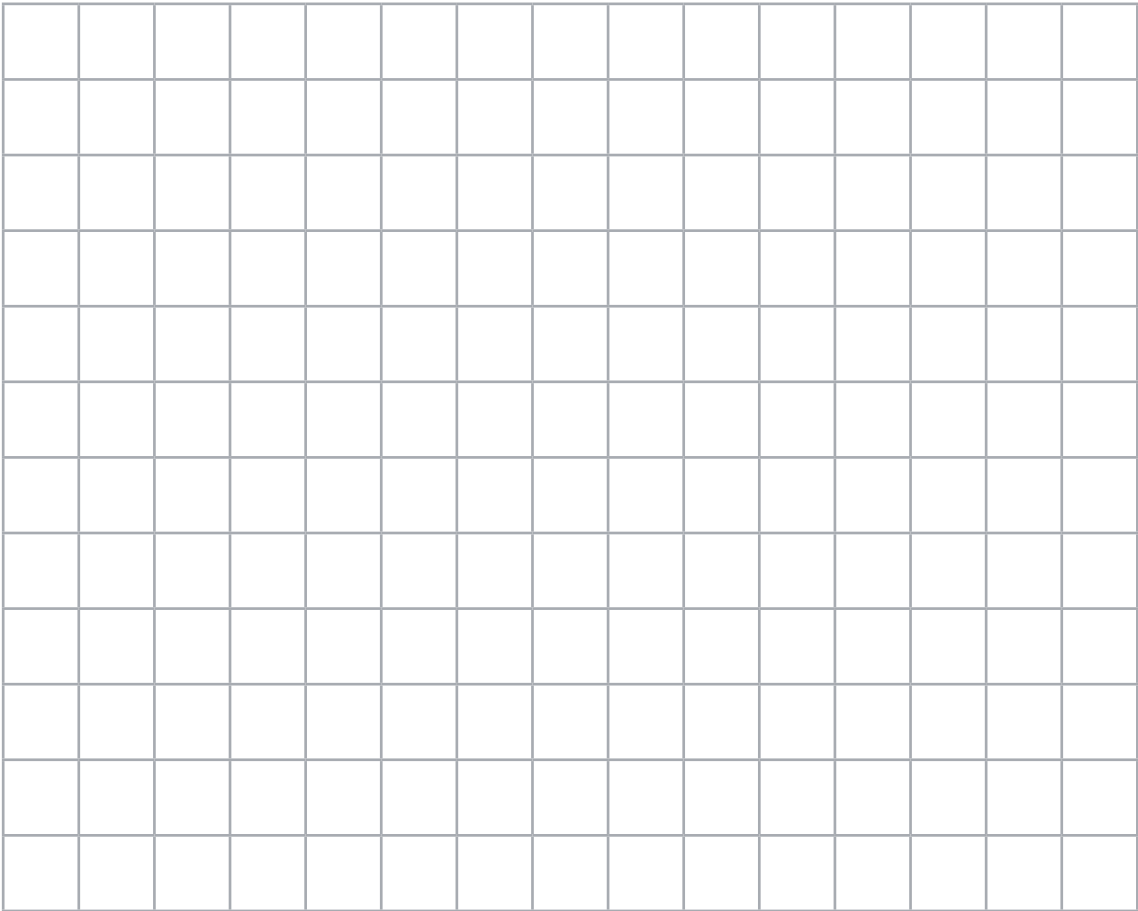


*9. Abi carried out a survey of the colours of the cars in the school car park.

Here are her results

Colour	Tally
Silver	
Blue	
Red	
Black	
White	

Draw a suitable chart or diagram to represent Abi’s results.



(Total for Question 9 is 4 marks)



10. The two-way table gives some information about how 60 students travel to school.

	Bus	Train	Walk	Bicycle	Total
Boys		5		2	31
Girls	14		13		
Total	23			2	60

(a) Complete the two-way table. (3)

One of these students is going to be chosen at random.

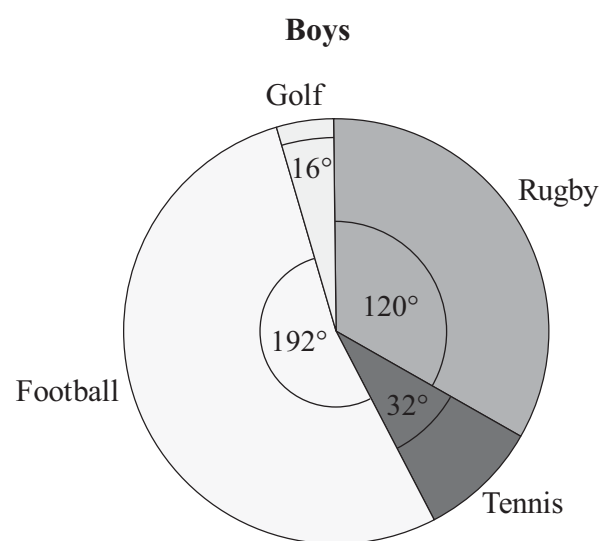
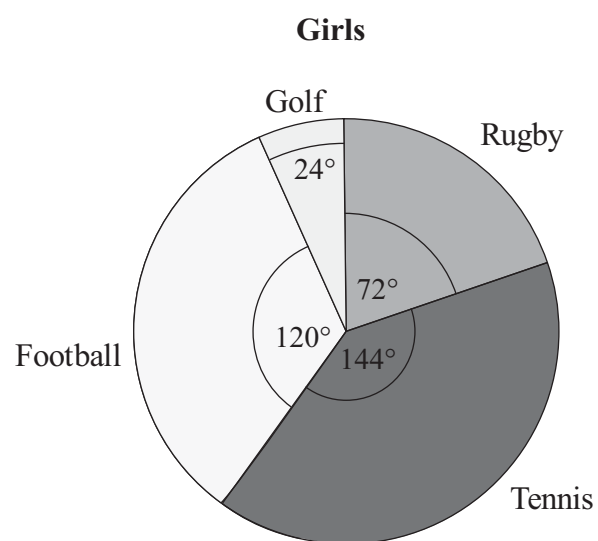
(b) Write down the probability that this student travels to school by bus.

(2)

(Total for Question 10 is 5 marks)



11. Some girls and some boys were each asked to name their favourite sport.
The pie charts were drawn from this information.



Six girls named rugby as their favourite sport.

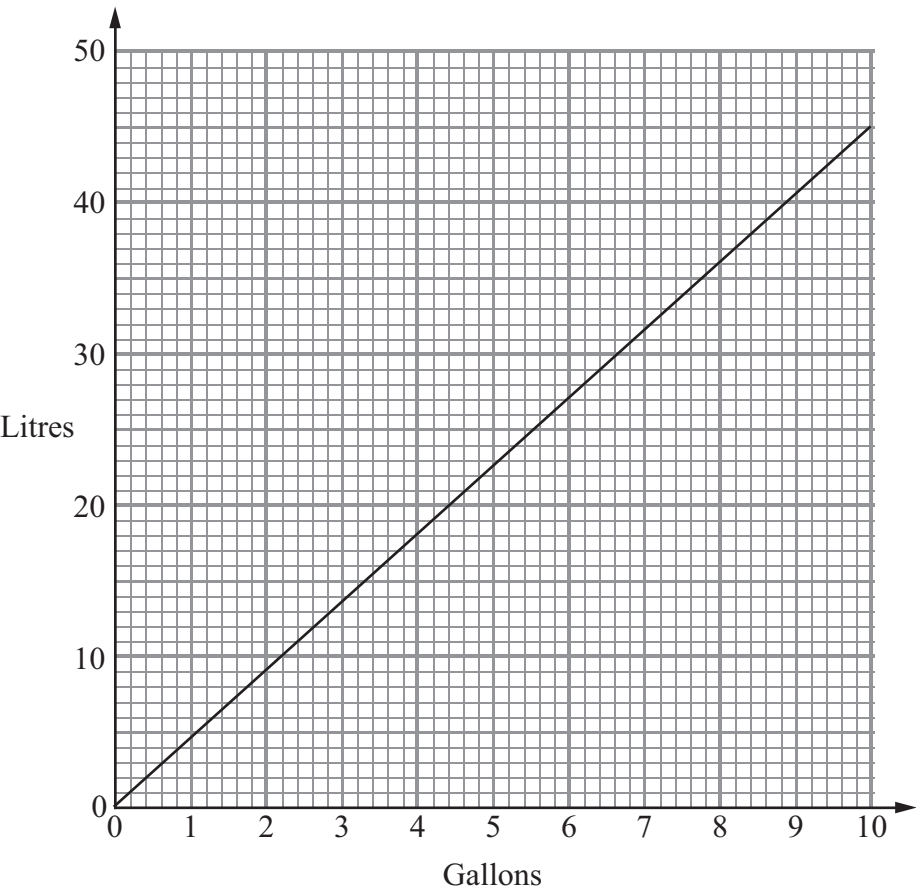
The same number of boys as girls named golf as their favourite sport.

How many boys named football as their favourite sport?

(Total for Question 11 is 3 marks)



12. This graph can be used to convert between gallons and litres.

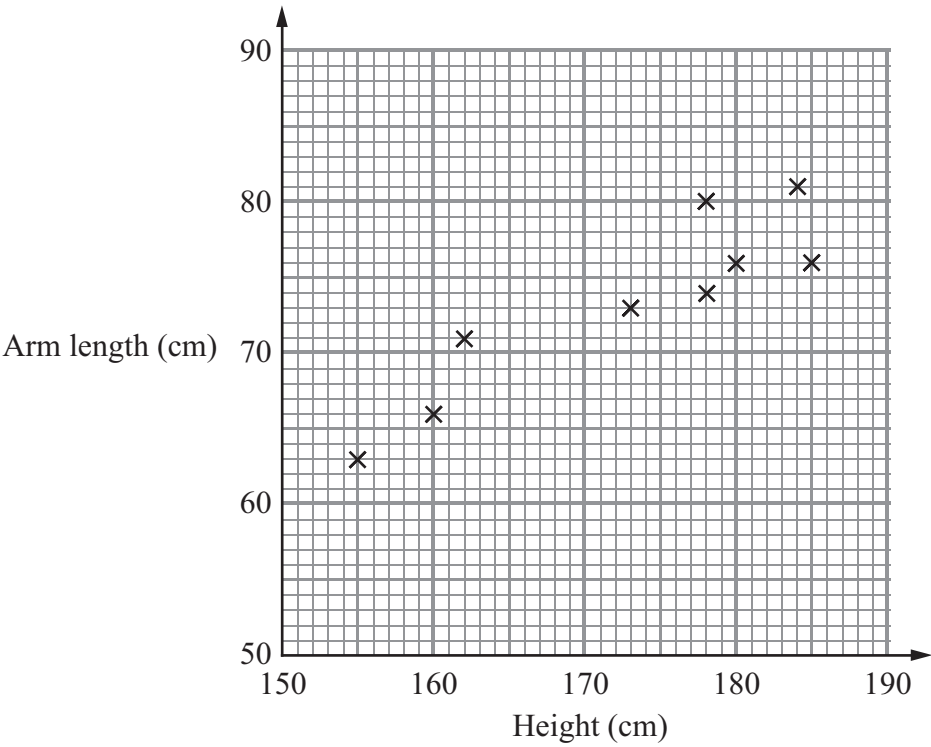


Hugh wants to put 15 gallons of petrol in his car.
Petrol costs 120.9p per litre.
How much will the petrol cost?

(Total for Question 12 is 4 marks)



13. The scatter diagram shows the height, in cm, and arm length, in cm, of some adults.



The table shows the height and the arm length of two more adults.

Height (cm)	175	163
Arm length (cm)	70	67

(a) On the scatter graph, plot the information from the table. (1)

(b) What type of correlation does this scatter graph show? (1)

(c) Estimate the arm length of an 165 cm tall adult. (2)

..... cm

(Total for Question 13 is 4 marks)



14. Kalipha wants to find out how much time students spend using their computers.
He will use a questionnaire.
Design a suitable question he could use on his questionnaire.

(Total for Question 14 is 2 marks)

15. The probability that a biased dice will land on a three is 0.4
Paul is going to roll the dice 200 times.
Work out an estimate for the number of times the dice will land on a three.

(Total for Question 15 is 2 marks)



16. Sarah went on holiday to Antigua.
In the shops, prices are given in either US dollars (\$) or in East Caribbean dollars (EC\$).
The exchange rate was \$1 = EC\$2.70

The price of a hat was EC\$65

Sarah knew that £1 = \$1.45

Work out the price of the hat in pounds.

£

(Total for Question 16 is 3 marks)

17. The table gives information about the times, in minutes, that 50 people waited to pay at a supermarket check-out.

Time (t minutes)	Frequency	
$0 < t \leq 2$	23	
$2 < t \leq 4$	9	
$4 < t \leq 6$	8	
$6 < t \leq 8$	6	
$8 < t \leq 10$	4	

Work out an estimate for the mean time.

..... minutes

(Total for Question 17 is 4 marks)

TOTAL FOR PAPER IS 60 MARKS





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